

## ABSTRACT

Disclosed herein is an apparatus and method for measuring bio-impedance attributable to joint movement. The bio-impedance measuring apparatus includes a constant current source, current stimulus electrodes, at least two voltage detection electrodes, a demodulator, a signal gain and offset controller and an isolated amplifier. The method of measuring bio-impedance attributable to joint movement, comprising the steps: generating a weak current by use of a constant current source; causing the weak current to flow from a point to another point; forming L voltage detecting electrode pairs from voltage detecting electrodes positioned at m points on each of n-1 lines that divide an interval between a first joint and a second joint, between which the weak current flows, into equal n parts (m and n are natural numbers), using combination ( $mC2=L$ ); detecting bio-impedance at certain periods from J (L-K) voltage detecting electrode pairs that are obtained by subtracting K voltage detecting electrode pairs, each of which exists on a single dividing line, from the formed L voltage detecting electrode pairs; and selecting a pair of voltage detecting electrodes having a highest variation of bio-impedance.